

## COLEMAN OUTLET PLAZA

California's rivers move mountains. Year after year, landslides, earthquakes, and floods remind us that California's landscape is involved in intense movement. The tectonic plates – two huge slabs of rock, thousands of miles long, grinding against one another – slide and collide along the continent's western edge, literally pushing up the material that forms our mountain ranges. This building process, called tectonic uplift, is occurring at a rate of 0.1 inch a year.

So what keeps the growth of California's mountains in check? First, the Earth's malleable interior allows its heaviest features, such as mountain ranges, to sink. The second dynamic is erosion. Laden with oxygen and water, our atmosphere and the plant life that it supports, assaults the rock that composes mountain ranges, turning it into clay and soil. The Guadalupe River plays an important role in moving this sediment.

Jet streams bring moisture from the Pacific Ocean eastward where it falls as rain or snow in the mountains. Plants intercept some of this water; some seeps down to form our groundwater or evaporates back into the atmosphere and recirculates. Driven by gravity, the rest of the water runs off the continent as rivers. These rivers complete the process, moving immense amounts of sediment – the remains of the eroded mountains – toward the sea.

As part of the downtown Guadalupe flood protection system, a by-pass channel was constructed underground between Santa Clara Street and where you currently stand, Coleman Avenue, to divert overflow flood waters from overflowing their banks and damaging the park and surrounding properties. Although the river may appear as just a small trickle most of the time, if you're here during the rainy season you may experience water rushing by on its route to the San Francisco Bay. The bypass system returns the water to its natural channel here because the floodplain is wide and open north of Coleman Avenue, and can safely handle the greater flow of water.